

VIEWPOINT

PHYSICIAN WORK ENVIRONMENT AND WELL-BEING

Creating a “Manageable Cockpit” for Clinicians A Shared Responsibility

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For many clinicians, the work of health care has become undoable. The “cockpit” where physicians and other health professionals work now consists of a cacophony of warning alerts, pop-up messages, mandatory tick boxes, a Sisyphean inbox, and maddening documentation. Paradoxically, many interventions intended to improve quality, safety, or value, when taken in totality, may in fact contribute to health system dysfunction by virtue of the cumulative impact on workload and consequent burnout. Although technology was meant to help, it has instead brought a wealth of new opportunities for administrative oversight and compliance monitoring.

Other industries that prioritize safety, such as the airline industry, incorporate the time and cognitive workloads of employees in the design of work. For example, a team of engineers protects the attention of pilots in the cockpit, seeking to prevent information overload by limiting the data displayed and requiring a “sterile cockpit” free from distractions when the pilot’s full attention is imperative.¹ Proposals for new alarms and warnings that individually offer the possibility of incrementally improving safety may ultimately be rejected because of the cumulative negative impact on the pilots’ cognitive load.

At present, the health care system in the United States has no mechanism for managing the stresses and liabilities associated with the momentum for more data and greater clinician accountability. There is no team of engineers whose job it is to ensure a sterile cockpit or even a “manageable cockpit” for clinicians: one that is free of information overload, distractions, interruptions, and cumbersome workflows that cumulatively contribute to a hazardous environment. No one is responsible for analyzing and minimizing the aggregated administrative and cognitive burdens.

Mandating performance measurement and capturing enough discrete data about individual clinicians are assumed to result in better care. Less appreciated is the central message of the Institute of Medicine’s report, *To Err Is Human: Building a Safer Health System*.² Published in 2000, the report emphasized that the majority of errors in health care are the result of systems factors, rather than substandard performance by individual clinicians. What happens, then, when the system monitoring individuals may itself engender a hazardous care environment?

Although many of the root causes of quality and safety breaches are systemic, interventions are frequently directed at clinicians’ interactions with the patients. For example, evidence-based health screenings are important; however, these recommendations should be considered in sum. In 2003, Yarnall et al³ estimated

that it would take a physician 7.4 hours per day to comply with all of the relevant prevention recommendations of the time. At present, there are even more recommendations. A sampling of those for a single primary care visit includes the following: assessment for fall risk, domestic violence, obesity, learning needs, tobacco use, medication adherence, substance use, and timeliness of referral appointments, as well as acquiring reports on eye examinations for patients with diabetes. Because the typical primary care visit is only 13 to 21 minutes, the patient’s agenda is often crowded out.

Similarly, many public health issues are not adequately addressed on a systemic level. Thus, the policy and regulatory focus is on the individual clinician, again putting physicians, not systems, at the sharp end of the accountability stick. For example, as a society we inadequately address the food and beverage industries and their contributions to obesity, so we seek to hold clinicians responsible for addressing obesity 1 patient at a time. We inadequately address the many factors that make medications unaffordable for some patients, but we seek to hold clinicians responsible for patient adherence to medication. Our efforts to control the tobacco industry are inadequate, so we mandate that clinicians counsel patients to stop smoking. The list could go on and on.

At present, clinicians are also responsible for translating the patient encounter into digital data for the use and convenience of payers, auditors, researchers, and policy makers. With the advent of electronic health records, it was assumed that physicians would add these clerical duties to their existing clinical responsibilities, without consideration of the costs. Heightened security concerns require multiple log-ins to electronic health records per patient and increasingly complex passwords with shorter half-lives. Audit data for electronic records demonstrate that physicians spend nearly as much time on security tasks as they do reviewing patients’ problem lists.⁴ Physicians in multiple specialties spend nearly 2 hours on electronic records and other administrative deskwork for every 1 hour of direct clinical face time with patients.^{4,5} The time pressures crowd out activities that are central to excellent patient care—engaging, listening to the patient, being empathetic, taking the time for careful medical decision making, and communicating with others involved in the patient’s care.

How can a manageable cockpit for clinicians be created? We offer these approaches:

1. *Develop measures of a manageable cockpit that capture the cognitive workload, time pressure, adminis-*

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trative and clerical work, and need for workarounds that clinicians experience. Such measures could include metrics for use of electronic health records (ie, “work after work,”⁶ the ratio of screen time with electronic devices to face time with patients⁵); and situational awareness, which assesses the ability of an individual to accurately perceive and understand key information in their workplace.⁷

2. *Establish clinician well-being as a health system metric.* The well-being of the workforce could serve as a summative proxy measure for a manageable cockpit.
3. *Encourage and apply research regarding interventions to create a more manageable cockpit.* For example, documentation assistance (ie, medical scribing)⁸ and co-visits with physicians and nurses with enhanced responsibilities⁹ can improve practice efficiency and satisfaction. Time can also be saved through the use of badge readers, which allow the user to tap their ID badge for log-in to electronic health systems, rather than typing in user name and password.
4. *Establish industry best practices to support a manageable cockpit for clinicians.* These could include best practices within the health insurance industry to minimize the burden of obtaining prior authorizations, within the technology sector to minimize the time and cognitive workload associated with the use of electronic health records,

and within the regulatory sector to decrease documentation and signature requirements that add to clerical burden without evidence of clinical benefit. Measure and publicly report the extent to which these best practices are achieved.

5. *Hold institutions, payers, technology vendors, the developers of clinician metrics, and state and federal agencies accountable.* For example, the executive leadership team of a health delivery system could hold itself collectively accountable for the “work after work” and the well-being scores of clinicians. Moreover, the Centers for Medicare & Medicaid Services is embarking on an effort to ease administrative burdens, although as of January 2018 details are limited.¹⁰

In sum, many clinicians in the United States face more work each day than can be reasonably managed. Is it in the interests of patients for their physicians to spend the majority of their workday on tasks that may not require their medical training to complete? Are there better approaches to improving patient safety and access to care, while decreasing the costs of medical care and enhancing the well-being of health professionals? Part of the evaluation of every new policy and technology should be the impact on the people who are doing the work. Ensuring a manageable cockpit for clinicians is a shared responsibility among all the organizations and interests in the health care system.

ARTICLE INFORMATION

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REFERENCES

1. Flight crewmember duties. 14 CFR §121.542 (2014).
2. Institute of Medicine Committee on Quality of Health Care in America; Kohn LT, Corrigan JM,

Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academies Press; 2000.

3. Yarnall KS, Pollak KI, Østbye T, Krause KM, Michener JL. Primary care: is there enough time for prevention? *Am J Public Health*. 2003;93(4):635-641.
4. Arndt BG, Beasley JW, Watkinson MD, et al. Tethered to the EHR: primary care physician workload assessment using EHR event log data and time-motion observations. *Ann Fam Med*. 2017;15(5):419-426.
5. Sinsky C, Colligan L, Li L, et al. Allocation of physician time in ambulatory practice: a time and motion study in 4 specialties. *Ann Intern Med*. 2016;165(11):753-760.
6. DiAngi YT, Lee TC, Sinsky CA, Bohman BD, Sharp CD. Novel metrics for improving professional fulfillment. *Ann Intern Med*. 2017;167(10):740-741.

7. Endsley MR. Direct measurement of situation awareness: validity and use of SAGAT. In: Endsley MR, Garland DJ, eds. *Situation Awareness Analysis and Measurement*. Mahwah, NJ: Lawrence Erlbaum; 2000:147-174.

8. Gidwani R, Nguyen C, Kofoed A, et al. Impact of scribes on physician satisfaction, patient satisfaction, and charting efficiency: a randomized controlled trial. *Ann Fam Med*. 2017;15(5):427-433.

9. Funk KA, Davis M. Enhancing the role of the nurse in primary care: the RN “co-visit” model. *J Gen Intern Med*. 2015;30(12):1871-1873.

10. 21st Century Cures Act, HR 6, 114th Cong (2015). Pub L No. 114-255.